

Claims 1-34 (Cancelled)

35. (Currently Amended) An apparatus, comprising:
- means for ~~persistently~~ storing a user-specific profile between usage sessions;
  - means for automatically determining ~~a relation of a~~ at least one of an image and video information content of media content records;
  - means for determining a relation of the automatically determined information content with a stored user-specific profile;
  - means for presenting identifications of the media content records, ~~arranged~~ in dependence on ~~a degree of~~ the determined relation, for selection therefrom by the user;
  - means for receiving feedback from the user on said presentation; and
  - means for updating the ~~persistent~~ user-specific profile based on ~~said~~ the feedback.
36. (Currently Amended) The apparatus according to claim 35,
- wherein said apparatus is an information access system for presenting users with information items of interest;
  - further comprising content records storing means comprising a computer system containing a database of information items available to be presented to users of the system;
  - further comprising accessing means comprising at least one access device for enabling users to communicate with the computer system and access a media content record;
  - wherein said user-specific profile storing means stores a user profile for a plurality of users;
  - wherein said relating means comprises means for ~~ranking~~ determining a likely ~~degree of~~ agreement of a plurality of the available media content records with a respective user-specific profile;
  - wherein said presenting means presents a menu listing identifications of the media content records ~~in order of ranking~~ based on the likely agreement and enabling a user to retrieve a media content record through the access system;
  - wherein said feedback receiving means comprises means for enabling the user to indicate that user's preference for a retrieved media content record; and

wherein said updating means comprises means for updating the user-specific profile in response to indications of preference provided by the user.

37. (Currently Amended) The apparatus of claim 36, wherein said ~~ranking~~ likely agreement determining means ~~ranks~~ indexes the available items of information for a user on the basis of at least one attribute pertaining to a plurality of media content records.

38. (Previously Presented) The apparatus of claim 35, wherein said media content records comprise video programs.

39. (Currently Amended) The apparatus of claim 36, wherein said ~~ranking~~ likely agreement determining means produces a formula which predicts the interest of a user in a media content record on the basis of at least one of a user profile and an attribute related to that media content record.

40. (Currently Amended) A method, comprising:  
storing a ~~persistent~~ user-specific profile between usage sessions;  
receiving a user identification of at least one user;  
relating automatically characterized at least one of an image and video information content of media content records with a stored user profile for the identified user; and  
presenting to the user identifiers of the related media content ~~records~~, according to in dependence on the relation a degree of agreement between a characterization of a respective media content ~~record~~ and the user specific profile, wherein the identifiers are associated to the respective media content ~~records~~ for automated access thereto after selection by the user.

41. (Currently Amended) The method according to claim 40, for providing information to users ~~of a computer system~~, further comprising the step of storing a plurality of media content ~~records~~ items and characterizations thereof, wherein:  
~~said media content record storing step comprises storing items of information in an unstructured database within the computer system;~~

~~said user profile storing step comprises determining and storing user profiles for users of the computer system who have access to the items of information;~~

~~said receiving a request step comprises receiving a request from a user for access to the stored information;~~

said relating step comprises determining a user's likely degree of interest in entertainment media content items of information stored in said database, in accordance with that user's profile, and indexing ranking the items of information media content in accordance with their determined degrees of interest; and

said presenting step comprises displaying identifications of the items of information media content to be selected by the user through a user interface, with an indication of their relative index rankings.

42. (Currently Amended) The method of claim 41, wherein said items of information are displayed in order of their indexing ranking.

43. (Currently Amended) The method of claim ~~40~~ 41, wherein the automatically characterized information content of media is characterized based on an automated pattern analysis of at least one of an image, and an audio track, and a synchronized audio and video pattern ~~user profiles and the determined degree of interest in items of information are based upon at least one attribute associated with a plurality of items of information.~~

44. (Currently Amended) The ~~method~~ apparatus of claim ~~35~~ 43, wherein said means for automatically determining an information content of media content records comprises a processor performing algorithms for at least one of automated image pattern analysis, automated audio pattern analysis and automated synchronized audio and video pattern analysis ~~attribute is the content of the item of information.~~

45. (Currently Amended) The method of claim 41, further including the steps of selecting media content an item of information from those which are displayed, providing an indication of the user's actual interest in the selected media content item of information, and storing the user's indicated interest.

46. (Currently Amended) The method of claim 41, wherein the likely degree of interest is determined for all of the available media content items of information stored in said database in response to receipt of a user's request for access.

47. (Currently Amended) A method, comprising the steps of:  
automatically generating a user profile representing an interest summary for a respective user based at least on a history of access to objects comprising entertainment media;  
persistently storing the user profile in memory between access attempts of the objects;  
generating a menu of available objects corresponding to the user profile and indicating a likely preference for a respective available object by the respective user, arranged in dependence on a degree of agreement correlation between the user profile and automatically generated characterizations of at least one of an image and video information content of available objects;  
and  
tracking menu use as a part of the history of access to objects.

48. (Currently Amended) The method of claim 47, for providing a user with access to selected ~~ones of a plurality of target objects and sets of target object characteristics~~ that are accessible via an electronic storage media, where said user is connected via user terminals and data communication connections to a ~~target~~ server system which accesses said electronic storage media, wherein:

said automatically generating step generates at least one user ~~target~~ profile ~~interest summary~~ for a user at a user terminal, each of said user ~~target~~ profile ~~interest summary~~ being indicative of ones of said ~~target~~ objects, and associated sets of target automatically generated characterizations of objects ~~object characteristics~~ accessed by said user; and

said storing step stores said at least one user ~~target~~ preference profile ~~interest summary~~ in a memory.

49. (Currently Amended) The method of claim 48, further comprising the steps of:  
enabling said user to access said plurality of ~~target~~ objects and ~~sets of target object characteristics~~ stored on said electronic storage media;

said step of enabling access comprising:

correlating said user ~~target~~ profile interest summaries, generated for said user, with ~~target~~ profiles generated for said plurality of ~~target~~ objects and sets of ~~target object characteristics~~ automatically generated characterizations of objects to identify ones of said plurality of ~~target~~ objects and sets of ~~target object characteristics~~ stored on said electronic storage media that are likely to be of interest to said user;

transmitting a menu, that identifies at least one of said identified ones of said plurality of ~~target~~ objects and sets of ~~target object characteristics~~, to said user; and

providing access to a selected one of said plurality of ~~target~~ objects and sets of ~~target object characteristics~~ stored on said electronic storage media in response to said user selecting an item from said menu;

said step of providing access further comprising:

transmitting data, in response to said user activating said user terminal to identify said selected item on said menu, indicative of said user's selection of said selected item from said user terminal to said target server via a one of said data communication connections;

retrieving, in response to receipt of said data from said user terminal, ~~a one of a target an~~ object and set of ~~target object characteristics~~ identified by said selected item from said electronic storage media; and

transmitting said retrieved one of said ~~target object and set of target object characteristics~~ to said user terminal for display thereon to said user,

said step of automatically generating comprising:

automatically updating said user ~~target~~ profile interest summary for said user as a function of said ~~target~~ objects and sets of ~~target object characteristics~~ retrieved by said user.

50. (Previously Presented) The method of claim 48, wherein said automatically generating step comprises:

creating a customer profile, said customer profile indicating a respective customer's preferences for data;

monitoring a history of data objects accessed by the customer; and

automatically updating the customer profile in accordance with the content profiles accessed by the customer to automatically update the customer profile to represent the customer's preferences.

51. (Currently Amended) The method of claim 47, wherein said method is for scheduling customer access to data from a plurality of data sources,

further comprising the steps of:

creating content profiles for a plurality of data sources, said content profiles indicating a ~~degree of content of~~ predetermined characteristics in data from a respective data source;

said generating step comprises creating at least one customer profile for ~~an eligible a~~ a recipient of said data, said customer profile indicating a customer's preferences for data having predetermined characteristics;

monitoring which data sources are actually accessed by a recipient; and

updating, without explicit input from a customer, a respective customer profile in accordance with the content profiles of the data sources actually accessed by that customer to automatically update the customer's actual preferences for said predetermined characteristics.

52. (Currently Amended) The method of claim 47, wherein said method is for scheduling customer access to ~~video~~ entertainment media ~~programs~~,

further comprising the steps of:

creating content profiles for a plurality of entertainment media ~~video programs~~ available ~~for viewing~~, said content profiles indicating a ~~degree of content of~~ predetermined characteristics in a respective entertainment media ~~video program~~;

creating at least one customer profile for a respective customer ~~of said video programs~~, said customer profile indicating a customer's preferences for predetermined characteristics of the entertainment media ~~video programs~~;

monitoring which ~~video programs~~ entertainment media are actually ~~viewed~~ perceived by the respective customer; and

updating, without explicit input from the customer, the respective customer profile in accordance with the content profiles of the ~~video programs~~ entertainment media actually ~~viewed~~

perceived by that customer to automatically update the customer's actual preferences for said predetermined characteristics.

53. (Previously Presented) The method of claim 52, comprising the further steps of receiving customer identity information and determining from said customer identity information which customer profile to update in said updating step.

54. (Previously Presented) The method of claim 47, wherein said method is for scheduling customer access to data from a plurality of data sources, further comprising the steps of:

creating a customer profile indicating a respective customer's preferences for predetermined characteristics of the data sources;

monitoring which data sources are actually accessed by the respective customer; and

updating the respective customer profile to reflect a frequency of selection of the data sources by customers with customer profiles substantially similar to the respective customer's profile.

55. (Currently Amended) An apparatus, comprising:  
means for automatically generating a user profile representing user preferences for a respective user based at least on a history of access to objects from menu selections;  
a memory for ~~persistently~~ storing the user profile between usages; and  
an output port for presenting identifiers of objects arranged according to a ~~degree of agreement~~ correlation between a user profile and automatically determined at least one of image and video information content characteristics of a set of objects.

56. (Previously Presented) The apparatus according to claim 55, for providing a user with access to selected ones of a plurality of target objects and sets of target object characteristics that are accessible via an electronic storage media, where said user is connected via user terminals and data communication connections to a target server system which accesses said electronic storage media, comprising:

means for automatically generating at least one user target profile interest summary for a user at a user terminal, each of said user target profile interest summaries being indicative of ones of said target objects and sets of target object characteristics accessed by said user; and  
means for storing said at least one user target profile interest summary in a memory.

57. (Previously Presented) The apparatus of claim 56, further comprising:  
means for enabling said user to access said plurality of target objects and sets of target object characteristics stored on said electronic storage media;  
said means for enabling access comprising:  
means for correlating said user target profile interest summaries, generated for said user, with target profiles generated for said plurality of target objects and sets of target object characteristics to identify ones of said plurality of target objects and sets of target object characteristics stored on said electronic storage media that are likely to be of interest to said user;  
means for transmitting a menu, that identifies at least one of said identified ones of said plurality of target objects and sets of target object characteristics, to said user; and  
means for providing access to a selected one of said plurality of target objects and sets of target object characteristics stored on said electronic storage media in response to said user selecting an item from said menu.  
said means for providing access comprising:  
means for transmitting data, in response to said user activating said user terminal to identify said selected item on said menu, indicative of said user's selection of said selected item from said user terminal to said target server via a one of said data communication connections;  
means for retrieving, in response to receipt of said data from said user terminal, a target object identified by said selected item from said electronic storage media; and  
means for transmitting said retrieved target object to said user terminal for display thereon to said user;  
said means for automatically generating comprising:  
means for automatically updating said user target profile interest summary for said user as a function of said target objects and sets of target object characteristics retrieved by said user.

58. (Currently Amended) A system, comprising:



A memory, storing a persistent customer profile, said customer profile indicating a respective customer's preferences for data derived from a history of selection of media data objects by the customer;

~~means for monitoring a history of data objects selected by the customer;~~ and

means for automatically updating the stored customer profile in accordance with content profiles of media data objects selected by the customer from menu selections, the content profiles of data objects being generated automatically in dependence on at least one of an image and video information data content of the media data object, to automatically update the customer profile to represent the customer's preferences.

59. (Currently Amended) The system according to claim 58, for scheduling customer access to data from a plurality of data sources, further comprising:

Automatically generated content profiles for a plurality of data sources, said content profiles indicating ~~a degree of content of~~ predetermined characteristics in data from a respective data source;

wherein:

at least one customer profile for an eligible recipient of said data is provided, said customer profile indicating the customer's preferences for data having predetermined characteristics;

said ~~monitoring~~ means for automatically updating monitoring monitors which data sources are actually accessed by a recipient, ~~;~~ and

~~said updating means updates~~, without explicit input from a customer, updating a respective customer profile in accordance with the content profiles of the data sources actually accessed by that customer to automatically update the customer's actual preferences for said predetermined characteristics.

60. (Currently Amended) The system according to claim 58, for scheduling customer access to video programs, said media objects being video programs ~~received from a video head end~~, further comprising:

content profiles for a plurality of video programs available for viewing, said content profiles indicating ~~a degree of content for~~ predetermined characteristics in the video program;

wherein:

a customer profile indicates a respective customer's preferences for predetermined characteristics of the video programs;

said means for automatically updating monitoring ~~monitors~~ which video programs are actually viewed by the customer;<sup>5</sup> and

~~said means for updating~~ updates, without explicit input from the customer, updates the customer profile in accordance with the content profiles of the video programs actually viewed by that customer to automatically update the customer's actual preferences for said predetermined characteristics.

61. (Previously Presented) The system as in claim 60, further comprising:  
means for transmitting said content profiles along with electronic program guide data for upcoming television viewing periods to customers.

62. (Previously Presented) The system as in claim 60, further comprising  
means for inputting customer identity information and for determining from said customer identity information which customer profile to update with said updating means.

63. (Currently Amended) The system according to claim 60, for scheduling customer access to data provided by a plurality of data sources, further comprising:

means for creating a customer profile for a customer of said plurality of data sources, said customer profile indicating said customer's preferences for predetermined characteristics of the data sources;

said ~~means for automatically updating comprising means for~~ monitoring ~~means monitors~~ which data sources are actually accessed by a respective customer; and

said updating means updates a respective customer profile to reflect a frequency of selection of the data sources by customers with customer profiles substantially similar to said respective customer profile.

64. (Currently Amended) The system according to claim 58, being a multimedia terminal for receiving data from a plurality of data sources, further comprising:

means for storing at least one customer profile indicating a customer's preferences for data having predetermined characteristics;

means for storing content profiles for a plurality of data sources, said content profiles indicating ~~a degree of content of~~ said predetermined characteristics in data from a respective data source;

means for inputting recipient identity information;

means for selecting different customer profiles which correspond to said recipient identity information ~~in accordance with the time of day and day of the week~~;

processing means for relating said selected customer profiles with the content profiles for the data available from a respective data source to the customer at a particular time and for determining a subset of data having content profiles which most closely match said selected customer profile; and

a display guide for presenting said subset of data to said customer for selection.

65. (Previously Presented) The system as in claim 64, further comprising means for storing an electronic program guide, wherein said display guide highlights programs within said electronic program guide which correspond to said subset of data.

Claims 66-112 (Cancelled).

113. (Currently Amended) The system according to claim 58, for presenting a program ~~to a viewer, said data objects being programs~~, further comprising:

a source of program material;

a memory for storing received program material;

a processor for selectively processing the program material based on a correlation between the user profile and a characterization of the content of the program material.

114. (Currently Amended) The system according to claim 113, wherein said selective processing is selected from one or more of the group consisting of ~~persistently~~ storing the program material, outputting the program material separately from unselected program material, updating a user preference profile, and deleting the program material from temporary storage.

115. (Currently Amended) An apparatus, comprising:

~~means for storing a plurality of content objects;~~

means for automatically accessing a set of stored the content objects, said set of stored content objects being associated with automatically generated content object profiles, said automatically generated content object profiles comprising a content profile at least one of an image and video information content;

means for storing a persistent user-specific profile between usage sessions, indicating a respective user's preferences for content and representing a history of content objects selected by a user;

~~means for monitoring a history of content objects selected by the user from a menu of content object identifiers;~~

~~means for relating content objects with a stored user profile;~~

~~means for rendering at least one related content object for the user;~~

means for implicitly deriving a user profile, without requiring explicit user feedback, on said relation based on the automatically generated content object profiles of respective objects and a history of user interaction with respective objects, to predict a user's preferences by observing the user and monitoring a history of user selection of the content objects; and

~~means for automatically updating the stored user-specific profile based on said the feedback.~~

116. (Currently Amended) A method, comprising:

storing descriptors of a plurality of content objects;

~~persistently~~ storing a user-specific profile associated with a user preference derived automatically from a history of selection of descriptors contained in a menu and associated automatically generated content object characterizing information over a plurality of usage sessions, said automatically generated content object characterizing information comprising characterizing information of at least one of an image and video information content;

associating at least one content object corresponding to the user preference, not previously presented to the user, with the stored user profile;

presenting the descriptor of the associated content object corresponding to the user preference to the user as part of a menu of possible selections; and

receiving a selection of the descriptor from a user to identify the corresponding content object, and updating the user specific profile in dependent thereon.

117. (Currently Amended) A method, comprising the steps of:

automatically generating a user-specific interest profile ~~representing an interest summary~~ based on at least automatically determined characteristics of objects represented in a history of selection of objects from a menu, said automatically determined characteristics comprising characteristics of at least one of an image and video information content;

~~persistently~~ storing the user interest profile in memory between usage sessions;

interactively presenting identifiers of a set of objects to the user, in dependence on a correspondence between members of the set of objects and the interest profile summary, and receiving from the user a selection of an object from the set, presented in a menu; and accounting for selection or a result of the selection of the object.

118. (Currently Amended) An apparatus, comprising:

means for automatically generating a user-specific profile representing a user's preferences based at least on a history of access to objects;

a memory for ~~persistently~~ storing the user profile between usage sessions;

a user interface comprising a representation of a set of alternate available selectable objects menu, interactively presenting identifications of a set of objects to the user corresponding to the user's preferences, and receiving from the user a selection of an object ~~from the menu~~; and ~~an a financial~~ accounting system for charging a user account for selection or a result of the selection of the object by the user.

119. (Currently Amended) A system, comprising:

a user interface for receiving a data object selection from a menu by a user customer, from a plurality of accessible data objects having associated content profiles;

means for monitoring a history of data objects and associated content profiles selected by the user customer to derive the respective user's customer's preferences for data;

a persistently stored ~~customer~~ user profile, said ~~customer~~ user profile comprising a respective ~~customer's~~ user's preferences for data over a succession of data object selections;

means for automatically updating the ~~customer~~ user profile in accordance with content objects selected by the ~~customer~~ user to represent the ~~customer's~~ user's preferences for data, and accounting for the ~~customer's~~ user's satisfied demand for data.

120. (Withdrawn) The system according to claim 55, wherein:  
said persistently stored user profile is received as subscriber specific data;  
said history of access to objects is based on received program control information; and  
said means for automatically generating a user-specific profile is a program selection means, for selecting one or more programs using the stored user profile and history of access to objects.

121. (Withdrawn) The method according to claim 47, comprising the steps of:  
receiving subscriber specific data to provide the history of access to objects;  
receiving program control information; and  
selecting one or more programs using the user subscriber specific information and the program control information.

122. (Currently Amended) An apparatus according to claim 55, further comprising:  
a source of program material, said objects comprising program material; and  
a memory for storing received program material,  
wherein said means for automatically generating a user profile comprises a processor for selectively processing the program material based on a correlation between a user preference and a an automatically generated characterization of the content of the program material.

123. (Currently Amended) The system according to claim 58, wherein said media data objects comprise ~~comprises~~ a time-continuous media program, further comprising program selection means, for selecting one or more programs using a customer's preferences and program control information for controlling receipt of a media program.

124. (Currently Amended) The system of claim 123, further comprising a hardware device associated with a video display comprising said means for monitoring and a memory for storing said ~~persistent~~ customer profile, wherein the program selection means comprises a graphic user interface presenting said menu on said video display.

125. (Currently Amended) The system according to claim 58, being a ~~set-top terminal~~ used by subscribers of a ~~television~~ program delivery system for suggesting programs to subscribers using program control information containing program description data, and subscriber specific data indicative of a subscriber's programming preferences, ~~the set-top terminal~~ comprising:

a memory storing program comprising the data automatically generated content profiles from a plurality of available ~~broadcast~~ programs.

126. (Currently Amended) The system of claim 58, being a ~~set-top terminal~~ used by subscribers of a television program delivery system for suggesting programs to subscribers using program control information containing scheduled program description data, ~~the set-top terminal~~ further comprising:

means for transforming the customer profile information into preferred program indicators, wherein a preferred program indicator comprises a program category with each program category having a weighted value;

a means for matching the preferred program indicators with scheduled program description data, wherein each scheduled program is assigned a weighted value based on at least one associated program category;

a means for prioritizing the scheduled programs from highest weighted value programs to lowest weighted value programs; and

a means for indicating one or more programs meeting a weight related threshold, wherein all other programs are excluded from program suggestion.

127. (Currently Amended) The method of claim 47, ~~implemented by a set-top terminal~~ used by users of a television program delivery system for suggesting programs to user using

program control information containing scheduled program description data, ~~the set-top terminal~~ further comprising the steps of:

~~means for transforming a history of programs watched into preferred program indicators, wherein a program indicator comprises a program category with each program category having a weighted value;~~

~~comparing the preferred program indicators with the scheduled program description data, wherein each scheduled program is assigned a weighted value based on at least one associated program category;~~

~~prioritizing at least a portion of a set of the scheduled programs from highest weighted value programs to lowest weighted value programs;~~

~~indicating one or more programs having a relatively higher weight, wherein all other programs having a relatively lower weight are not simultaneously indicated excluded from program suggestion; and~~

~~suggesting the selected programs to the user.~~

128. (Currently Amended) An apparatus, comprising a processor receiving as an input a persistently stored user profile derived from at least a history of user interaction with the apparatus, the user profile representing at least user media content preferences, said processor generating an output representing a user interface comprising a menu having a plurality of options available for user selection, and receiving as an input a user selection of an option, updating the user profile in dependence on the user selection and automatically generated characteristics of a respective option or data associated therewith, at least one respective option comprising an image, video or multimedia content object, executing a function in accordance with the selection; and producing an output representing the user profile for ~~persistent~~ storage between usage sessions.

129. (Previously Presented) The apparatus according to claim 128, further comprising a media database, wherein the user selection defines a media program to be stored in or retrieved from the media database.



130. (Previously Presented) The apparatus according to claim 128, wherein the user interface comprises a graphic user interface, further comprising a pointing device for manipulating a cursor on the graphic user interface.

131. (Previously Presented) The apparatus according to claim 130, wherein the pointing device communicates wirelessly with the processor.

132. (Previously Presented) The apparatus according to claim 131, wherein the pointing device has a local display providing a user output.

133. (Previously Presented) The apparatus according to claim 128, wherein the memory stores a plurality of user profiles for separate users, wherein the processor receives a user identification in order to select a respective one of the user profiles.

134. (Previously Presented) The system of according to claim 128, further comprising a memory for storing a catalog of available options.

135. (Previously Presented) The system according to claim 128, wherein at least one option is encrypted, and requires decryption for completion of execution of the function.

136. (Previously Presented) The system according to claim 128, wherein the function comprises implementation of a serial copy management protocol.

137. (Previously Presented) The system according to claim 128, further comprising an accounting subsystem, wherein a selection of an option is accompanied by an accounting entry in said accounting subsystem.

138. (Previously Presented) The system according to claim 128, wherein a selection of an option is communicated remotely to an accounting system, which accounts for the selection by the user.

139. (Previously Presented) The system according to claim 128, further comprising an accounting database, said function executed by said processor subsystem comprising sequentially a first aspect and a second aspect of use of proprietary content, said accounting database differentially accounting for said aspects.

140. (Previously Presented) The system according to claim 128, wherein said menu comprises between four and eight options.

141. (Previously Presented) The system according to claim 128, wherein said processor subsystem is adaptive to changing user preferences.

142. (Currently Amended) The system according to claim 128, wherein said user interest summary comprises a ~~media-genre~~ type of program preference.

143. (Previously Presented) The system according to claim 128, wherein said processor subsystem comprises a correlator, for correlating a user profile with an option characteristic profile.

144. (Previously Presented) The system according to claim 128, wherein said processor subsystem comprises a buffer for storing received media content prior to a decision as to whether the received media content should be persistently stored.

145. (Previously Presented) The system according to claim 128, wherein said processor subsystem performs a discrete cosine transform function on image data.

146. (Previously Presented) The system according to claim 128, wherein said processor subsystem performs a wavelet function on image data.

~~146~~ 147. (Currently Amended) The system according to claim 128, wherein characteristics of ~~an~~ at least one option are represented as a set of media model representations ~~described semantically~~.

~~147~~ 148. (Currently Amended) The system according to claim 128, wherein a characteristic of an option comprises parameters of serialized presentation.

~~148~~ 149. (Currently Amended) The system according to claim 128, wherein characteristics of options are communicated from a remote database.

~~149~~ 150. (Currently Amended) The system according to claim 128, wherein said processor subsystem can perform a plurality of functions on separate options simultaneously, wherein each said function comprises processing a time-continuous stream of information.

~~150~~ 151. (Currently Amended) The system according to claim 128, wherein said processor subsystem correlates a plurality of characteristics associated with an option with the user profile to predict a user action.

~~151~~ 152. (Currently Amended) The system according to claim 128, wherein said processor subsystem operates in a time-dependent manner.

~~152~~ 153. (Currently Amended) The system according to claim ~~151~~ 152, wherein said processor subsystem synchronizes an internal clock with a remote system.

~~153~~ 154. (Currently Amended) The system according to claim 128, wherein said processor subsystem performs speech recognition.

~~154~~ 155. (Currently Amended) The system according to claim 128, wherein said functions comprise processing of broadcast media, wherein the characteristics of the broadcast media are received from a remote database.

~~155~~ 156. (Currently Amended) The system according to claim 128, wherein said processor subsystem monitors a real time information stream.

~~156~~ 157. (Currently Amended) The system according to claim 35, wherein a plurality of content records are stored in a common physical storage medium.

~~157~~ 158. (Currently Amended) The system according to claim 35, wherein said means for storing comprises a means for recording and reproduction under control of a user.

~~158~~ 159. (Currently Amended) The system according to claim 35, wherein said means for ~~relating~~ determining a relation selects content records from an inferred user preference.

~~159~~ 160. (Currently Amended) The system according to claim 35, wherein said ~~characterization information~~ identifications comprises a content identifier, a broadcast time, a channel code, and descriptive information.

161. (New) A system for creating a viewer preference profile, comprising:  
a memory for storing viewer profile, said viewer profile indicating a respective viewers preferences for predetermined characteristics of video programs;  
a memory for storing a set of content profiles for available video programs, said content profiles comprising automatically generated characterizations and indicating predetermined characteristics in the video programs;  
means for monitoring a history of interaction of a viewer with video programs; and  
means for automatically updating the viewer profile in accordance with content profiles of the video programs interacted with by the viewer, to represent the viewer's expressed preferences.

162. (New) The system according to claim 161, further comprising means for communicating said content profiles along with electronic program guide data for upcoming program viewing periods to viewers.

163. (New) The system according to claim 161, further comprising means for inputting viewer identity information and for determining from said viewer identity information which viewer profile to update with said automatic updating means.

164. (New) A system for updating viewer preference profiles, comprising:  
a receiver for receiving video object identifying and characterizing information, comprising automatically generated analysis relating to a respective video object, separate from associated video objects;

a memory storing at least one viewer profile, a viewer profile indicating a viewer's preferences for video objects;

means for monitoring a history of video objects selected by the viewer; and

means for automatically updating the viewer profile in accordance with the identifying and characterizing information of video objects selected by the viewer from menu selections, to automatically update the viewer profile to represent the viewer's preferences.

165. (New) The system according to claim 164, further comprising a processor for determining quantitative relationships of video objects and the viewer profile.

166. (New) The system according to claim 165, wherein the quantitative relationship comprises a correlation.

167. (New) The system according to claim 164, wherein said characterizing information comprises at least one criterion of classification.

168. (New) The system according to claim 165, further comprising an output presenting identifications of a set of video objects likely to be preferred by the viewer.

169. (New) The system according to claim 165, further comprising a video object storage system for storing at least one video object determined to be likely to be preferred by the viewer, based on the determined quantitative relationships.

170. (New) The apparatus according to claim 118, wherein said means for updating comprises an input for receiving a set of automatically generated characterizations of multimedia content, and a processor for inferring a user profile based on respective characterizations of objects historically accessed by the user.

171. (New) The system according to claim 119, wherein said associated content profiles are generated, at least in part, by automated means.

172. (New) The system according to claim 119, wherein said customer's satisfied demand for data is accounted by introducing a bias against characteristics of data objects recently selected by the customer.